

AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

1. – 5. (Cancelled)

6. (Currently Amended) A system for treating a vessel occlusion in a body comprising:

a sheath, having a sheath body, said sheath body having a proximal end and having a distal end;

a lumen extending through said sheath body from said proximal end to said distal end;

a catheter having a catheter body having a proximal end and a distal end terminating in distal tip, wherein the catheter body and the sheath body are capable of being mechanically pushed to advance the distal tip;

an energy source coupled to said distal tip;

a magnetically active element located proximate said distal tip of said catheter body sufficient to align the distal tip of the catheter generally with respect to the direction of an applied magnetic field; and

a magnet outside the body that applies a magnetic field of sufficient strength to align the magnetically active element with respect to the direction of the applied magnetic field to orient the distal tip of the catheter.

7. (Currently Amended) A system for treating a vessel occlusion in a body comprising:

a sheath, having a sheath body, said sheath body having a proximal end and having a distal end;

a lumen extending through said sheath body from said proximal end to said distal end;

a catheter having a catheter body having a proximal end and a distal end terminating in a distal tip;

an energy source coupled to said distal tip for delivering therapeutic energy to a vessel occlusion;

a magnetically active element forming a portion of said distal end of said sheath body sufficient to align the distal tip of the sheath generally with respect to the direction of an applied magnetic field; and

a magnet outside the body that applies a magnetic field of sufficient strength to align the magnetically active element with respect to the direction of the applied magnetic field to orient the distal end of the sheath, such that the catheter advances in a direction determined by the magnetic orientation of the distal end of the sheath.

8. (Previously Presented) The system of claim 6 wherein the catheter further includes a first metallic element located proximate said distal tip adapted for coupling to a remote radio frequency energy source whereby RF energy coupled to said metallic element heats said metallic element.

9. (Previously Presented) The system of claim 8 wherein said metallic element forms one pole of a monopolar energy distribution system.

10. (Previously Presented) The system of claim 9 wherein the catheter further comprises a second metallic element proximate said distal tip forming a pole of a bipolar energy distribution system.

11. (Previously Presented) The system of claim 6 wherein the catheter further includes a thermally conductive element located proximate said distal tip adapted for coupling to a remote optical laser energy source whereby optical energy coupled to said thermally conductive element heats said thermally conductive element.

12. (Previously Presented) The system of claim 11 wherein said thermally conductive element is metallic.

13. (Previously Presented) The system of claim 6 wherein the catheter further includes an ultrasonic waveguide element located proximate said distal tip adapted for coupling to a remote ultrasonic frequency energy source.

14. (Previously Presented) The system of claim 6 wherein the catheter further includes a resistance heating element located proximate said distal tip adapted for coupling to a remote electrical energy source.

15. (Previously Presented) The system of claim 14 wherein the catheter further includes a resistance heating element located proximate said distal tip adapted for coupling to a remote AC electrical energy source.

16. (Previously Presented) The system of claim 14 wherein the catheter further includes a resistance heating element located proximate said distal tip adapted for coupling to a remote DC electrical energy source.

17. (Previously Presented) The system of claim 6 wherein the catheter further includes a fluid directing element located proximate said distal tip adapted for coupling to a remote hydraulic energy source, whereby fluid coupled to said device extracts occlusive material from locations near the distal tip.

18. (Previously Presented) The system of claim 6 wherein the catheter further includes said lumen extending from the proximal end to the distal end, and a laser imaging device located in said lumen for observing an occlusion.

19. (Previously Amended) The system of claim 6 wherein the catheter further includes said lumen extending from the proximal end to the distal end, and an ultrasonic imaging device located in said lumen for observing an occlusion.

20. - 28. (Cancelled)

29. (Previously Presented) The system of claim 14 wherein the distal tip is electrically isolated from but in thermal contact with the resistance heating element.

30. (Previously Presented) The system of claim 7 wherein the catheter further includes a resistance heating element adapted for connection to a remote electrical energy source, wherein the distal tip is electrically isolated from but in thermal contact with the resistance heating element.